

## Installation Instructions - Fit Kit S1

### Step 1:

- Make sure motor is NOT running!
- Remove cowl (cover) from motor.

### Step 2: Remove cover latch - See Fig. 1

- A: Use needle nose pliers to remove retaining clip from pin. Remove pin, washer and cover latch.  
B: Use #3 Phillips screwdriver to remove screw that was under latch.

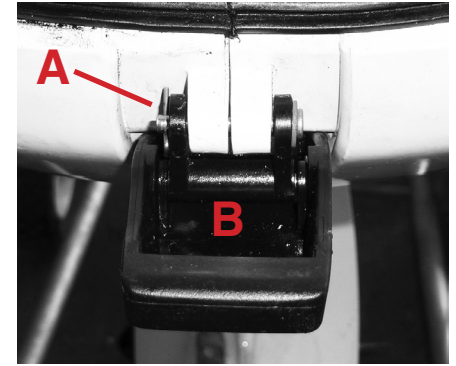


Figure 1

### Step 3:

- Fig. 2: At front right corner of motor, remove screw indicated by arrow.
- Fig. 3: On right side of motor, remove 3 screws. Remove right lower cover of motor.

### Step 4:

- On some motors, to remove lower right cover, it may be necessary to remove shift rod from motor.
- Fig. 2: Remove shift rod from clip in circle.
- Fig. 4: Remove shift rod from shift lever by removing bolt.

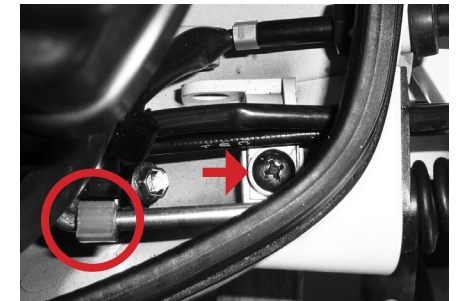


Figure 2

### Step 5:

- Find throttle rod directly underneath carb.  
• Fig. 5: Use screwdriver to separate lower throttle rod fitting from throttle cam.

### Step 6: See Fig. 6

- Measure distance "M" from throttle rod "neck" to end of throttle rod fitting.
- **DO NOT REMOVE ANY PART OF THROTTLE CAM FROM MOTOR!**
- Remove bolt "A" and stock washer from cam assembly.
- Hold bolt (from above) so threads face UP. Put stock washer on bolt, then supplied wave & flat washers.
- Place slip plate "B" against throttle cam and reinstall / tighten cam bolt.
- Slip plate should pivot easily.
- Place cushion "C" over cam ball fitting



Figure 3

### Step 7: See Fig. 7

- Loosen locknut "A" on throttle rod. Unscrew black ball fitting.
- Slide throttle adapter "B" onto throttle rod. Reinstall ball fitting so measurement "M" is the same as in Step 6. Tighten locknut on throttle rod.

**Note that end of throttle adapter where rod is located angles INWARD!**

### Step 8: See Fig. 7

- Find shoulder bolt assembly.
  - Put shoulder bolt through throttle rod fitting and secure it to slip plate.
- Make sure lock nut is installed between nut of shoulder bolt and slip plate!**

### Step 9: See Fig. 8

- Use supplied screws and locking nuts to attach servo to bracket.
- Remove 12mm bolt from motor and install servo and bracket.

**Note: Some motors may have a hose retainer under bolt. If retainer is present, retainer goes BETWEEN bolt and servo bracket!**

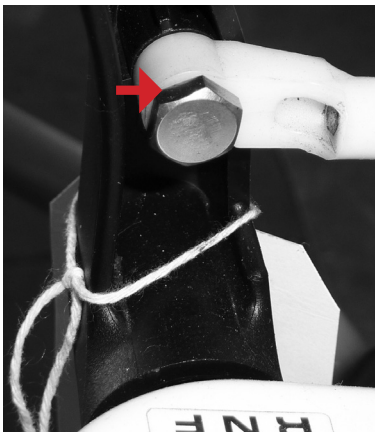


Figure 4

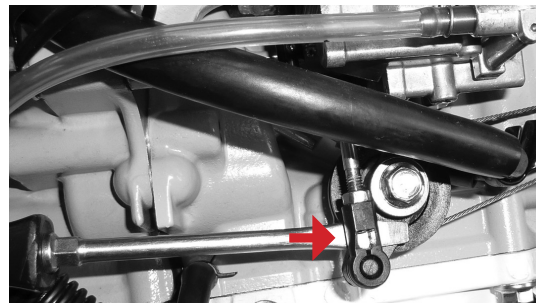


Figure 5

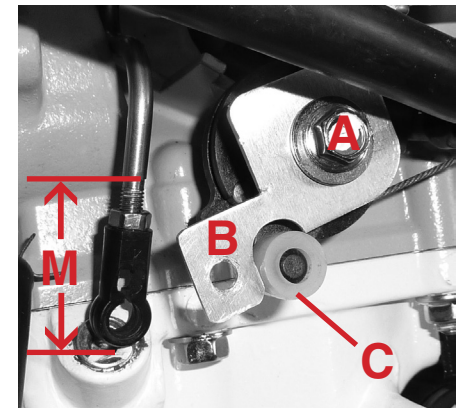


Figure 6

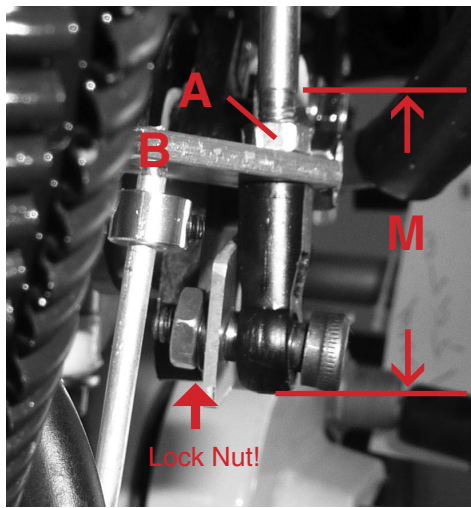


Figure 7

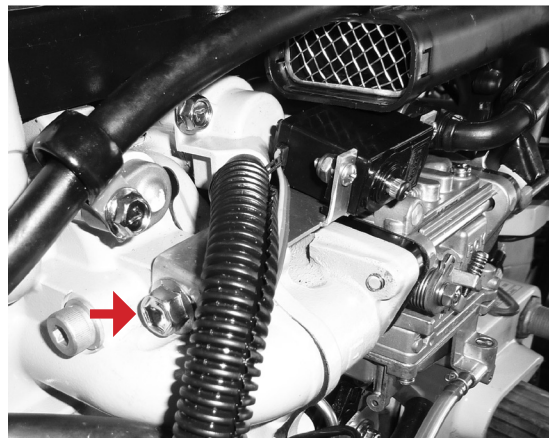


Figure 8

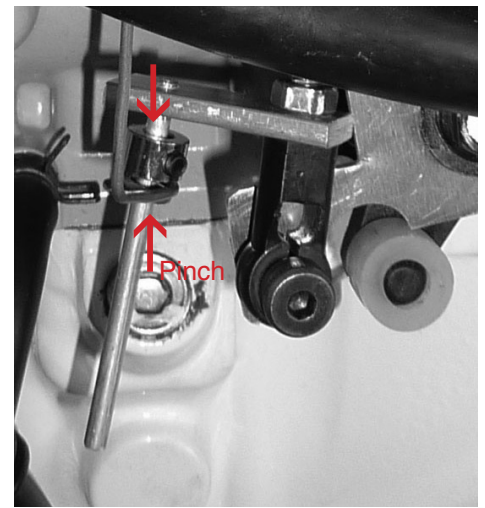


Figure 9

**Step 10:**

In this step, you are temporarily hooking iTroll's power module to your 12 Volt battery:

- Connect Red wire to (+) battery terminal. 5 amp fuse has been installed at factory.
- Connect Black wire to (-) battery terminal.

**Step 11:**

Plug servo motor into iTroll's servo control harness. Note that iTroll's 3 pin connector has a polarizing "DOT" on it. This dot corresponds to the servo's signal wire that is Orange, Yellow or White, depending on the brand of servo.

**Step 12:**

Use an Ink Marker to make a mark on the servo's geared shaft so you can positively see the direction that the shaft is rotating.

**Step 13:**

Plug data cable from iTroll into power module.

**Step 14:**

Turn iTroll on (see owner's manual if required), then operate dial to turn servomotor. OBSERVE mark you made on servo's shaft to see if servo is turning CLOCKWISE as you advance the throttle with iTroll's knob.

**Step 15:**

See "Reference 2" section on page 3 of regular iTroll installation instructions. Follow programming instructions to set servo Travel and Rotation. Set servo travel for "S" (90 degrees). If the servo is rotating in the correct direction as determined in Step 14, leave rotation direction the same as the indicated "old" direction in the rotation set menu. If you need to reverse the servo's rotation, change it in the rotation set menu.

**Step 16:**

- Turn iTroll ON.
- After iTroll starts up, press IDLE button to put servo at idle position. Confirm that iTroll is at idle by reading it's display.
- Install servo arm and pull rod as shown in Fig. 10. Note that rod in throttle adapter (Fig. 7) goes THROUGH loop in pull rod.
- Install fixing screw into servo arm.

**Step 17: See Fig. 9**

- Use supplied Allen wrench to loosen set screw of collar on rod of throttle adapter.
- PINCH collar and loop end of pull rod together.
- Tighten set screw on collar to fix it's position.
- Make sure throttle is fully closed. See Fig. 10

**Step 18:**

- Push iTroll's Run button and operate dial. Check for movement of throttle without sticking or binding.
- Reinstall all parts of motor that were taken apart to install servo.
- Proceed with permanent installation of iTroll (see electronics installation manual).

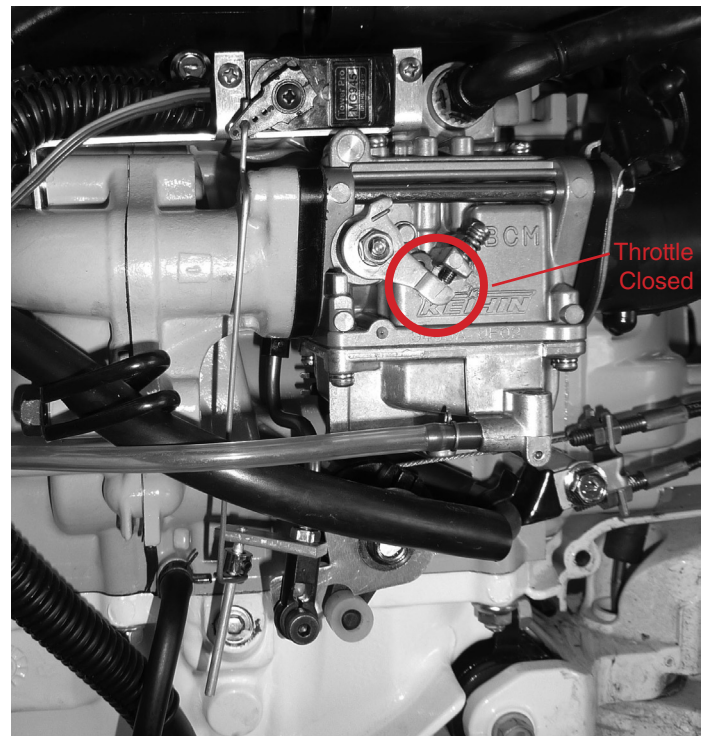


Figure 10 - Complete Installation